January 1940

Test 355: McCormick-Deering Model W-6 (Gasoline)

Tractor Museum
University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 355

Dates of test: September 16 to 27, 1940.
Name and model of tractor: McCORMICK-DEERING W-6 (Gasoline)
Manufacturer: International Harvester Company, Chicago, Illinois.
Manufacturer's rating: NOT RATED.

B E L T H O R S E P O W E R T E S T S

H. P.	Crank shaft speed R.P.M.	Fuel Consumption			Water used	Temp. Deg. F.		Barometer
		Gal. per hr.	H. P. hr. per gal.	Lb. per H. P. hr.	gal. per hr.	Cooling med.	Air	Inches of Mercury
TEST B - 100% MAXIMUM LOAD - TWO HOURS								
36.97	1450	2.964	12.47	0.496	0.000	193	78	29.050
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR								
36.15	1449	2.895	12.49	0.496	0.000	192	82	29.070
*TEST D - ONE HOUR								
33.11	1449	2.750	12.04	0.514	0.000	199	91	29.095
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
32.89	1447	2.743	11.99	0.516	--	200	91	--
1.36	1561	1.265	1.08	5.757	--	201	90	--
17.28	1507	1.977	8.74	0.708	--	197	92	--
33.33	1393	2.806	11.88	0.521	--	199	94	--
8.83	1542	1.614	5.47	1.131	--	200	94	--
25.54	1479	2.375	10.75	0.576	--	198	96	--
19.87	1488	2.130	9.33	0.664	0.000	199	93	29.105

D R A W B A R H O R S E P O W E R T E S T S

H. P.	Draw bar pull pounds	Speed miles per hr.	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption			Water used	Temp. Deg. F.		Barometer
					Gal. per hr.	H.P. hr. per gal.	Lb. per H.P. hr.	gal. per hr.	Cooling med.	Air	Inches of Mercury
TEST F - 100% MAXIMUM LOAD - Second - GEAR											
32.48	4282	2.84	1451	10.84	----- Not Recorded -----				191	67	28.930
TEST G - OPERATING MAXIMUM LOAD											
25.13	4777	1.97	1452	17.23	----- Not Recorded -----				197	62	29.000
31.44	4173	2.83	1451	11.44	----- " " -----				192	63	28.990
32.33	3156	3.84	1450	7.66	----- " " -----				193	66	28.955
32.14	2545	4.74	1451	6.12	----- " " -----				191	65	28.920
*TEST H - TEN HOURS - Second - GEAR											
25.48	3238	2.95	1450	6.84	2.525	10.09	0.613	0.000	199	63	29.110

*Formerly called RATED LOAD; see REMARKS 4, page 3.

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FUEL, OIL, AND TIME

Fuel Gasoline Octane 73 Weight per gallon 6.19 pounds

Oil: S.A.E. No. 20 To motor 2.486 gal. Drained from motor 2.153 gal.

Total time motor was operated 45 hours

BRIEF SPECIFICATIONS

Advertised speeds miles per hour: First 2-3/8 Second 3-1/8

Third 4 Fourth 4-7/8 Fifth 14-1/2 Reverse 2-7/8

Belt pulley: Diam 11" Face 7-1/2" R.P.M. 898 Belt Speed 2587 f.p.m.

Clutch: Make Rockford Type Single plate Operated by foot

Seat Pressed steel with sponge rubber pad

Total weight as tested (with operator) 7610 pounds

MOTOR

Make Own Serial No. WBK 511XI Type 4 cylinder vertical

Head I Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 3-7/8" x 5-1/4" Rated R.P.M. 1450

Port diameter valves: Inlet 1.594" Exhaust 1.438"

Magneto: Make Own Model H-4

Carburetor: Make Own Model E-12 Size 1-1/4"

Governor: Make Own Type Variable speed, centrifugal

Air Cleaner: Make Donaldson Type Oil-washed, wire screen filter

Oil Filter: Make Motor Improvements Inc. Type Partial flow with replaceable bakelite impregnated paper element

Cooling medium temperature control: Bishop and Babcock thermostat and Pines radiator shutters

CHASSIS

Type Standard Serial No. WBK 511XI Drive Enclosed gear

Tread width: Rear 53" Front 46-3/4"

Rear tires: No. 2 Size 13.50 x 24 - 6 ply Air pressure 16 pounds

Front tires: No. 2 Size 6.50 x 16 - 4 ply Air pressure 25 pounds

Added weight: Per rear wheel (Cast Iron 970 pounds
(Water 336 pounds

Per front wheel (Cast Iron 80 pounds
(Water None pounds

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

REMARKS

1. All results shown on page 1 of this report were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, and H were made with an operating setting of the carburetor (selected by the manufacturer) of 98.1% of maximum belt horsepower.

	DRAWBAR	BELT
2. Observed maximum horsepower (tests F & B)	32.48	36.97
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	33.81	38.74
4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. ratings)	25.36	32.93

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 355.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers